

## ABSTRACT OF THE DISCLOSURE

5 A semiconductor integrated device includes a boron containing  
layer 4 containing an isotope  $^{10}\text{B}$  formed on a semiconductor substrate  
1. Neutrons irradiated to the boron containing layer 4 are brought  
into a reaction with the isotope  $^{10}\text{B}$  to emit  $\alpha$  rays which are then rushed  
into the semiconductor substrate 1 to generate electron - positive hole  
pairs 8 in a P-N junction layer. Thus, neutrons are detected.

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